Argonne National Laboratory: Experiencing the Life of a Scientist

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Argonne National Laboratory: Experiencing the Life of a Scientist

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It’s a chilly November morning and the sun is not up yet, but we are. Today is the day we have spent weeks preparing for, and now our group of Lake Forest College undergraduates are finally heading towards Argonne National Laboratory for the 20th annual undergraduate symposium. This symposium will present topics from cellular biology to engineering to astrophysics and all topics between. Driving towards the entrance, we come to a stop at security gates. Argonne may be just a laboratory, but much of what the scientists do is kept secret and under tight security. Only after showing proper identification, as well as having guards search in and around the bus, did we receive our badges to enter the labs. We drove past the gates and started through the large complex of white buildings. This was not how I thought of a laboratory. The large building connected by pipelines and deserted roads, still in the early morning, reminded me more of a scene from an apocalyptic movie than a place of science. Upon entering the symposium center, the mood quickly changed as hundreds of undergraduates and their mentors were signing in, eating breakfast, and touring the site.

With a few bites to eat and some coffee to wake us up, we began the day with a short tour of the Advanced Photon Source, a 1.1-kilometer long particle accelerator that has a range of uses from visualizing atoms to observing the tracheal system of a grasshopper. This instrument used a single hair from Beethoven’s head to discover that the amount of lead in his body was over sixty times that of a normal person. This discovery supports the idea that he died of lead poisoning, a historical treatment for syphilis. Now we know what top-secret work really goes on at this lab. With such a massive instrument, how would one get from one side to the other? Tricycles of course, conveniently provided for researchers needing to move around this giant x-ray machine. After the short and enlightening tour, our group of Lake Forest undergrads led by Dr. DebBurman and Dr. Westley move on to hear the first keynote speaker, Dr. Jamie Stalker, who was speaking on the growing fear of an H1N1 pandemic. Although we hear much about the swine flu, we rarely hear it from a doctor. This brief overview of the history and trends of the flu was a warming change to what we commonly hear.

With the keynote speaker finished, it was now time for some last minute preparations for our afternoon presentations. As the few of us in the molecular biology session started walking over to the presentation uploading stations, we found that the computer had already been moved four hours before the presentations began. We began our first of many walks between buildings on this chilly day. Until this point, I had not been thinking about my own presentation. My presentation was just another impersonal talk in front of a darkened audience. Walking into the room however, we saw that this presentation was not going to be what we expected. Even with only twenty chairs, the room was crowded. The audience was going to be three feet away, and the room was light enough to see the interest in your presentation (or lack thereof) reflected in the last rows eyes. Now knowing what this presentation was going to be like, we headed back to meet up with the rest of the group for a delectable pizza buffet lunch.

The first presentation that the group watched was titled, “The Chemistry of Breaking Glass.” The presentation was a rather interesting look at why glass breaks more easily when it is in contact with water. More importantly, we saw what was expected of our own presentations. Afterwards, we headed to the cell biology session to hear the first of the Lake Forest students, Ejaz Ali ’10, present his research. Also presenting at the Argonne Symposium from Lake Forest were Keith Solvang ’11, Shabana Yusufishaq ’12, Natalie Simak ’11, Yama Sadozai ’10 and Elaine Gustafson ’10. Several of us trekked across to another building to give our presentations in the molecular biology session. Kayla Ahlstrand ’12 and I sat down to watch the presentation before ours. Soon enough we were next to show what we had done with all our spare time this semester. After all the practicing and perfecting of the past week, we were ready to go. The presentation proceeded smoothly and was soon over. There had been much preparation for such a short talk. Soon after our presentation, Yekatsiaryna Kastsetskaya ’12 and Saajidha Rizvydeen ’12 flowed through their presentations with an ease that can only come with preparation.

Following all the presentations, there was one more keynote speaker. After such a long day packed with information, the thought of another speaker was overwhelming. We walked into the lecture hall worn and slow, but were quickly intrigued by Dr. Michael LaBarbera, a professor from the University of Chicago. His talk titled, “A Biologist Goes to the Movies,” was an engaging experience combining some of the lowest quality monster movies made in the last half century with simple and humorous physiological explanations discarding such creatures’ abnormally large size and actions. Such a lecture could make even the most exhausted individual find the energy to laugh at the end of the day.

Finally, as the day was coming to a close, all the undergraduates headed over for a final banquet ready with a jazz quartet playing in the corner. Thinking back over all the information that I learned on this day, one thought stood out in particular: of all the schools represented at the symposium, there were few, if any, others that had the quantity and quality that matched Lake Forest’s presenters. Each presenter was ready and well prepared with strong
visuals and solid presentations, direct results of the hard work and attention that each professor gives to their students. On this day at Argonne National Labs, the Lake Forest College undergraduates clearly stood out through the preparation and knowledge of their research.

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